Dr. B. SACHS and A. G. GERSTER, of New York, presented a paper entitled

THE SURGICAL TREATMENT OF FOCAL EPILEPSY; A CRITICAL ANALYSIS OF THE RESULT IN NINETEEN CASES.

(ABSTRACT.)

For the last six years the authors have attempted to study in a thoroughly unbiased fashion the results of the various surgical procedures for the cure or relief of partial epilepsies. They include not only cases due to traumatic injury, but those associated with infantile cerebral palsies or some other acute cerebral condition. Their list of cases does not, however, include those in which the epilepsy is due to tumor. Before detailing their own cases the authors lay special stress upon the unsatisfactory results to be gained by a mere statistical inquiry of the cases reported in literature. The majority of these are reported either too early, or, if reported, the cases are not properly analyzed. It is their opinion that the results after operative procedures for the cure of epilepsy should not be considered unless at least a period of one year or even three have elapsed since the time of the operation. But they also state that it is not well to exclude all cases in which the attacks return soon after the operation, for in some of these decided improvement sets in later on. A number of authors have condemned every surgical procedure without in the least attempting to account for the failure to cure or to improve the patient. Thus the mere fact of an addiction to alcohol is of itself sufficient to explain the failure to cure epilepsy by operative procedure. The epilepsy which is developed after a traumatic injury or in association with infantile cerebral palsies is evidently due to secondary degeneration of the association fibres in the hemispheres, for this degeneration originates from the focus of diseased tissue, and the epilepsy is generally developed in the course of a year or two. In this same period of time the epilepsy often appears after the initial injury. Horsley's proposition to excise the diseased tissue and thus prevent the epilepsy is considered to be based upon sound physiological principles, but in practice the results have not been so satisfactory as was expected, and the authors attribute this chiefly to the fact that after an epilepsy has lasted for a number of years and after secondary degeneration has been fully established, the excision of the original focus of disease cannot be expected to do good. It is important, therefore, if possible, to prevent the formation of secondary degeneration in the hemispheres by excision of the diseased tissues, or to prevent epilepsy by early surgical procedures in the case of depression of the skull and other cranial injuries. The authors' nineteen cases have been minutely tabulated with reference to the origin of the trouble, the interval elapsing between the traumatic injury or beginning of the epilepsy and the operation. The analysis of the nineteen cases shows that three were positively cured, two greatly improved, three somewhat improved, while in eleven cases there was absolutely no improvement. A study of all the cases shows that those in which there has been improvement the operation was done within a period of two years after the traumatic injury or the beginning of the disease. The same is true of those cases that were greatly improved but not cured, the failure to cure in these cases being ascribed to other causes, such as alcoholism or want of proper care after operation. The authors' views and experiences are summed up in the following conclusions :

1. That surgical interference is advisable in those cases of partial epilepsy in which not more than one or at the utmost two years have elapsed since the traumatic injury or beginning of the disease which has given rise to the convulsive seizures.

2. In case of depression or other injury to the skull surgical interference is warranted even though a number of years have elapsed, but the prospect of recovery is brighter the shorter the period of time since the injury.

3. Simple trephining may prove sufficient for a number of cases, and particularly in those cases in which there is an injury to the skull, or in which a cystic condition is the main cause of the epilepsy.

4. Excision of cortical tissue is advisable if epilepsy has lasted but a short time, and if the symptoms point to a strictly circumscribed focus of disease.

5. Since such cortical lesions are often of a micro-

scopical character, excision should be practised even if the tissue appears to be perfectly normal at the time of operation, but the greatest care should be exercised in order to make sure that the proper area is removed.

6. Surgical interference for the cure of epilepsy associated with infantile cerebral palsies may be attempted, particularly if too long an interval has not elapsed since the beginning of the palsy.

7. In cases of epilepsy of long standing, in which there is in all probability a widespread degeneration of the association fibres, every surgical procedure is absolutely useless.